A network topology approach in survival analysis

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Abstract.
Network topology can be used to simplify the complexity of the data sets. We are exploring its function in performing survival analysis to identify the most important factor that contributed to the survival time from diagnosis to death. This technique has the potential to illustrate easily some types of complex interactions in data set. Then, based on those interactions, the most important factor in survival analysis will be identified. In this paper, the interpretation of that network topology will be delivered by using centrality measures. An example in survival analysis will be presented and discussed.

Keywords: network topology, survival analysis, centrality measure, minimum spanning tree